What is reading comprehension and why is it important?

Comprehension is a highly complex cognitive process involving the intentional interaction between the reader and the text to create meaning (National Reading Panel, 2000). In other words, comprehension doesn't just happen; it requires effort. Readers must intentionally and purposefully work to create meaning from what they read. Good readers become so fluent and automatic at strategic comprehension processing that you rarely "see" the work they are doing. Strategic processing—a necessity for efficient and effective comprehension—involves using strategies to understand text, knowing when to use the various strategies, actively thinking about and monitoring what is read, understanding text structure, and engaging in meaningful discussions about text.

To help students acquire and use strategies for understanding the print sources they will encounter in their lives, students must be taught how to use text to think and learn. This requires teachers to teach from a variety of genres so that students develop expertise with different kinds of printed materials. At the same time, students need to engage in many years of reading.

What difficulties do students encounter that impact their ability to comprehend?

Five particular reasons associated with most reading comprehension problems include:

1. **Language delays and difficulties.** Learning to understand the meaning of what a text communicates depends a great deal on our capacity for understanding spoken language. Written and spoken language are related forms of communication; both depend on people using them to understand their meaning, organization, structure, and intent. Some students enter school with difficulties understanding spoken language due to disabilities, environmental challenges that cause delays in their language development, or second language learning. As a result, they are also likely to face difficulties understanding written language.
2. **Early reading difficulties leading to fluency problems.** Translating written words to spoken language allows readers to access the author's message. For students who experience difficulties with word recognition, struggle with decoding words, or read very slowly, the information in the text is often inaccessible. Reading quickly enough so that it sounds like "natural" language contributes to a student's comprehension—the reading flow and focus on comprehension are not disrupted by decoding.
3. **Lack of knowledge about the world and about words.** Knowing what words mean and how they relate to the world is critical to understanding print. At the same time, reading is often the source of new vocabulary knowledge and provides greater understanding of the world around us. Informational books introduce us to new ideas, and fiction often elicits emotional responses as we share in the sorrow or joy of a character. However, if we are unable to understand key words or how a text relates to our world, the stories or information fail to achieve their goal.
4. **Lack of knowledge of comprehension strategies and lack of skill in applying strategies appropriately.** Good readers employ strategies before, during, and after reading that help them comprehend text. For example, while we read we frequently, and often subconsciously, summarize facts and details and confirm or challenge our existing thinking about the subject at hand. This process is strategic, and the more we read, the more we improve. We use other strategies before reading, such as clarifying our purpose for reading (e.g., skimming the newspaper for information about a storm that occurred during the night). During and after reading, we reflect on how a particular text might impact us or relate to our understanding of the world. Many readers exhibit challenges in employing these strategies flexibly and effectively.

5. **Difficulties understanding text structures.** All written text follows some sort of rhetorical structure, such as the story grammar of narrative text or the organization structure used in an informational text. For many students, these structures are not readily clear. When students do not understand text structure patterns, like knowing all stories have a main character and a sequence of events, they have difficulty understanding what was read and making inferences.

What are important issues to consider in reading comprehension instruction?

Over the past several decades, our understanding of how students comprehend what they read and the impact of instruction on comprehension has grown tremendously. Still, several issues warrant our continued attention:

1. **The role of decoding in comprehension.** Before children learn to read, they are dependent on oral language and pictures to understand the world around them. Once they grasp the alphabetic principle, they begin to use their understanding of print and sounds to read words. For students who experience decoding difficulties, word recognition is like a traffic bottleneck on a highway. Regardless of their level of listening comprehension, they have to learn the process of word recognition, much like every car on the highway must slow down and pass through the bottleneck. Once decoding is mastered, and students become fluent readers, they are able to develop proficiency in reading comprehension.
2. **Strategy instruction versus content engagement.** Research on comprehension has demonstrated that proficient readers are strategic, orchestrating multiple strategies before, during and after reading. However, instruction in comprehension strategies without a focus on content may be useless. Effective comprehension instruction involves both strategy instruction and content engagement. We still need to know how best to integrate these two key instructional areas.
3. **Difficulties assessing comprehension to enhance instruction.** Although a number of different procedures are available to assess how well students can comprehend text, there is no universal consensus on one best way to assess comprehension. Each test format, such as multiple choice questions, the cloze procedure, or written responses to open-ended questions, provides a slightly different picture of students' comprehension skills since they are all influenced to some extent by different test-taking skills. Further, most comprehension tests are not "diagnostic" in the sense that they provide reliable information about how to improve comprehension. It is particularly difficult to reliably assess whether or not students are skilled at using reading comprehension strategies while they read, and there are no standardized tests available to assess these important skills. In spite of these limitations, teachers can form a useful picture of students' emerging reading comprehension skills by frequently examining their ability to comprehend and learn from text using multiple formats such as direct questioning, writing in response to reading, summarization, or interviewing students about their use of specific strategies while reading.

What classroom practices support students' reading comprehension?

Promoting Fluent Reading

Reading comprehension relies, in part, on fluent reading. Fluent readers are able to read a lot, make connections between texts they have read, and learn many new words. Disfluent readers are unable to learn many new words, do not develop proficiency in understanding text, and often learn to dislike reading.

Fortunately, developing reading fluency is not complicated. Teachers must ensure students have adequate decoding skills, as well as opportunities to read with support. Research suggests that practice reading and re-reading words, sentences, and connected text enhances accuracy and rate, and helps students make their reading sound like spoken language. An added advantage is that as they improve their fluency, students are also exposed to more words, which enhances their vocabulary. In turn, opportunities to read connected text broaden students' experiences with text and enhance their reading comprehension.

Building Background Knowledge

Comprehension occurs when a student integrates new information with their prior knowledge. Often students who are at-risk for early reading difficulties lack sufficient background knowledge or are less able to activate the knowledge they possess. Because of the importance of background knowledge in reading comprehension and the diversity of today's student population, teachers must be cautious not to make assumptions about students' previous experiences with language, concepts, ideas, and vocabulary.

Students can be explicitly taught how to link existing knowledge to new knowledge for the purpose of building comprehension. Before reading, students are taught to think about what they know about a topic and what they want to learn. During reading, teachers help students record or discuss the answers to the "want to learn" questions as well as revise any misconceptions about what students thought they knew. After reading, answers to the "want to learn" questions are finalized and unanswered or new questions are discussed. This strategy of explicitly showing students how to connect existing knowledge with new knowledge applies to both narrative and expository texts and can be used for reading and listening comprehension.

Developing Vocabulary Knowledge

There is little argument that vocabulary knowledge positively impacts reading comprehension and academic achievement. Understanding the relationship between vocabulary and comprehension is relatively straightforward. If students don't know the meanings of individual words, it is virtually impossible to understand the overall meaning of a sentence or paragraph.

Because vocabulary is so important for comprehension, developing students' knowledge of words and their meanings must be part of good comprehension instruction. Words typically are learned gradually. The more actively, purposefully, and deeply students process words, the better they learn them. Simply stated,

vocabulary gains are greatest if the meanings of words are explicitly, or directly, taught and this teaching is followed by meaningful engagement with the words during reading and through discourse after reading. Comprehension requires levels of word knowledge much higher than those achieved through traditional instruction, which often focuses on defining vocabulary words and using them in sentences.

Determining Which Words to Teach

When thinking about which words to teach, it is important to remember that vocabulary words have different uses and levels of importance. It is not always necessary to understand every word at the same level of meaning; some words are simply more important to understand and will be encountered more frequently. Overall, vocabulary should include words that students find useful in many contexts (e.g., in books, in magazines, on a website, in spoken conversation, on signs). Consider the following guidelines when selecting words to teach.

1. Don't overwhelm students with too many new vocabulary words.
2. Limit vocabulary instruction to essential words or phrases that will improve students' comprehension.
3. Teach words students are likely to encounter often.
4. Teach the most important words thoroughly with extensive instruction, discussion, and practice.

Teaching Vocabulary

Research on vocabulary does not support a single, "best" way to teach vocabulary. Vocabulary instruction should include the intensive study of some words and include opportunities for students to practice using new words in many meaningful contexts. Because effective vocabulary instruction is based on what students already know about a particular word and the nature of the word itself, some instructional approaches may be better for teaching some words than for teaching others. Instructional approaches for vocabulary include:

- **Explicit instruction:** Directly provide a student-friendly definition or synonym and some examples and non-examples to show the range of a word's meaning.
- **Visual word analysis:** If a vocabulary word or concept is unfamiliar to students, teach the word and its relationship to other already known words by using diagrams, concept maps, or feature analysis.
- **Word talk:** Talk, discuss, and use target vocabulary words in lessons, word-play activities, and conversations throughout the day.
- **Contextual analysis:** If the text provides enough information about an unknown vocabulary word, show students how to use the context or surrounding information in a text to infer a word's meaning.

Accelerating Language Development

English learners (ELs) and students with more limited language and vocabulary require instructional time each day devoted specifically to language development and language comprehension. Many reading programs are based on the assumption that students know foundational words; however, for ELs this is often not the case. They need instruction that focuses on the use of abstract foundational words such as will, can, have, and because. Language development should also include explicit vocabulary instruction and opportunities for extended conversation, both during reading instruction and during the rest of the school

day. Teacher-facilitated conversations and discussions can focus on literacy content—stories read each day, for example—or general concepts. In addition, these students need opportunities to use language in ways that promote accurate use of grammar and syntax. Using familiar content for this instructional focus allows ELs to concentrate on correct language use, rather than concept attainment. Specific practices and instructional strategies for developing language and comprehension include the following.

1. Select key vocabulary that will enhance understanding.
2. Provide a range of activities involving those key vocabulary concepts.
3. Provide meaningful English language input to students by responding to the intent of their utterances rather than pedantically correcting their speech.
4. Actively encourage students to practice expressing ideas and concepts in English.

Finally, language development should address ways students learning English can better understand the "language of the classroom." In elementary school settings, teacher language is extensive—both academic language and conversational language. This language may focus on the routines teachers expect students to follow, or the content they expect them to understand. Teachers should prompt and guide students through language. When ELs understand both the basic points and the nuances, it is much easier for them to comprehend instruction and learning goals.

Teaching Strategic Processing

Strategic processing—the use of strategies to understand text and the knowledge of when to use specific strategies during reading—is required for effective comprehension. It includes actively thinking about and monitoring what is read, understanding text structure, and engaging in meaningful discussions about text. This processing is referred to as strategic because it requires self-regulation on the part of the reader to understand the conditions of reading that require different types of thinking.

Explicitly Teaching Cognitive Strategies

Students can learn a number of strategies to improve their comprehension. Some of these include summarizing, finding the main idea, generating and answering questions, making connections, previewing and predicting, and self-monitoring and clarifying. When readers use strategies well, they are better able to retain, organize, and evaluate the information they read. Explicit instruction in comprehension strategies is critical because it provides students with a model for how expert readers process text. Specifically, explicit strategy instruction should (a) define the strategy, (b) demonstrate the steps of the strategy and how and when it works, (c) model multiple examples, (d) provide extensive opportunities for strategy practice, (e) structure further opportunities for review and additional practice, and (f) provide corrective feedback. The following are some critical comprehension strategies students must learn.

1. Identifying important information (main idea)
2. Inferring/predicting
3. Monitoring/clarifying
4. Generating and answering questions
5. Visualizing
6. Summarizing

Developing Metacognition

Metacognition, or self-regulated thinking, is an internal dialogue or "self talk" between the reader and the text that focuses on what a reader is thinking and what the reader knows during reading. Specifically, it involves (a) knowing how and when to use a variety of comprehension strategies and (b) actively monitoring understanding. First, metacognition involves an understanding of how certain strategies aid comprehension, such as how identifying the main idea helps with summarizing. Students who develop metacognition also understand that not all comprehension strategies are equally important at all times; the usefulness of the strategy depends on the purpose for reading. Second, good readers remember more if they ask themselves questions during reading and actively monitor their understanding. For example, many good readers constantly and automatically ask themselves questions such as, "Does this make sense? Is this the main character? How does that relate to the plot of the story?" The active monitoring of understanding is the metacognition that initiates and maintains comprehension throughout the reading process.

Despite the cognitive complexity of monitoring understanding during reading, metacognition is viewed as an instructional priority in grades K–3. For example, the National Research Council (1998) included the abilities to "distinguish whether simple sentences are incomplete and fail to make sense" and "notice when texts fail to make sense" as first grade goals. At first thought it might seem to be an enormous instructional challenge to teach elementary students self-monitoring strategies, especially if students are not reading independently. However, while research on metacognition in the early grades is relatively limited, using text-based discussions and questioning appear to be an ideal way to teach students to self-monitor. For example, teacher "think alouds" during text-based discussions can be used to model self talk. When using think alouds during reading, a teacher might pause and say, "We just read that the bear was slumbering. I'm not sure what slumbering means. Let's reread this page to see if we can figure out what slumbering means." Another example of using text-based discussions for the purpose of promoting self-monitoring is a teacher's modeled retelling of the story. "Now I'm going to retell the story." The teacher models the retell. "Did I include all the story information in my retell?" Finally, students can even be taught to listen to a partner retell a story and provide feedback to their partner on whether or not they included all of the critical information.

Understanding the Features of Texts

In addition to comprehension strategies, students must learn about how text is put together. The early elementary grades are an ideal time to teach text structure because of children's interest in stories. Identifying narrative text structure, such as during a story "read aloud," gives students a framework for discussing and retelling stories. As a story is read, the teacher guides students in discussing who the story is about, what happened first, what happened next, and what happened at the end. If these elements are always used to identify critical features of a story, students have repeated opportunities to discuss story elements and make text-to-text connections related to main characters and story sequence.

Reading expository, or informational, text requires a slightly different set of comprehension skills and an understanding of how informational text structure differs from narrative text structure. Reading informational text often involves reading to locate (and possibly record) particular information, rather than reading to learn something in a linear, sequential fashion. Because informational texts use a variety of

organizational patterns (e.g., compare and contrast, cause and effect) that are different from traditional narrative text, understanding them is more difficult for nearly all students. Often skills for understanding informational text are not taught until fourth grade, if at all. However, recent research has found that elementary grade students can be taught to identify differences between narrative and expository texts and understand the features of informational text structure. They are able to answer questions such as, "Is this a story book or an information book? How do you know? How/why would we read a story book and an information book differently?"

Engaging in Content

Focused text-based discussions, or "text talk," appear to increase vocabulary and comprehension by helping students actively engage in and focus on content. Effective engagement in learning content from text requires using comprehension skills, understanding the purpose of text, recognizing text structures and features, asking and answering critical questions while reading, and monitoring understanding by engaging in meaningful text-based discussions. All in all, content engagement with text-based discussions is one way to show students how to orchestrate many of the components of comprehension to demonstrate how comprehension works. When students focus on understanding content that interests them, they are truly "putting it all together" in terms of comprehension.

The use of read alouds is one way to incorporate structured, interactive teacher-student discussions. Rather than simply reading a text aloud without pauses for discussion, text-based discussions can be used to create opportunities for students to reflect on the storyline or the text's language to promote comprehension. For example, a teacher might pause to have students identify the main character and then expand the discussion by asking about specific character clues. Moreover, instead of just asking students to make predictions, the teacher might ask why students made a particular prediction. After reading the relevant story segment, structured discussion might also include follow-up questions asking students to prove whether or not the prediction was correct. Most importantly, students become true partners in a teacher-student dialogue about the reading's content.

Teachers can also provide opportunities for students to talk with one another about a text to actively engage in content. Literature discussion groups, or "book clubs," can be used to promote student-to-student, text-based talk. Book clubs may consist of a small group of students or student pairs matched by the teacher. During reading, the teacher pauses and asks student groups to discuss a particular comprehension question. For example, the teacher might ask students to turn to their book club partner to share who they think is the main character in the story. The use of book clubs to increase content engagement encourages students to use meaningful vocabulary and makes text-based discussion a routine.

Finally, promoting content engagement requires carefully sequenced teacher-student conversations. Student comprehension can be scaffolded, or supported, through the use of questioning, prompting, and extending discussion. For example, as students practice using the main idea strategy, the teacher might ask them a series of questions that prompts them to articulate the steps in finding the main idea. A planned series of questions and prompts can also be used to help support student inferential understanding during read alouds.

What factors should be considered when evaluating or enhancing a comprehensive reading program for the strategic processing component of comprehension?

When evaluating or enhancing the reading comprehension instruction within a comprehensive reading program, lessons should include opportunities for students to:

- Learn comprehension skills (e.g., noting details, sequencing, using text structure and organization)
- Explicitly learn comprehension strategies (e.g., main idea, summarizing)
- Understand the purpose of the text (e.g., Is the text narrative or expository?)
- Recognize text structures and features
- Ask critical questions while reading
- Engage in meaningful text-based discussions
- Participate in book clubs or literature discussion groups to increase content engagement

What are the "big ideas" of comprehension instruction?

Comprehension is the ultimate goal of reading. Therefore, the primary purpose of reading instruction is to help students develop the skills and strategies needed to successfully construct meaning from text. Students must read a lot. They must establish sufficient reading fluency to allow them to focus attention on gaining meaning from text instead of decoding. Rather than simply mastering isolated skills, students must be able to orchestrate multiple strategies before, during, and after reading. In addition, students must develop their knowledge base on a variety of topics in order to understand a wide array of texts. Overall, comprehension instruction must teach students how to intentionally interact with the text to create meaning. Developing students' comprehension takes time, and instruction must begin early.

Bibliography

Anderson, R. C., & Nagy, W. E. (1991). Word meanings. In R. Barr & M. L. Kamil & P. B. Mosenthal & P. D. Pearson (Eds.), Handbook of reading research (Vol. 2, pp. 690-724). New York: Longman.

Baker, S., Gersten, R., & Grossen, B. (2002). Remedial interventions for students with reading comprehension problems. In M. R. Shinn, G. Stonner, & H. M. Walker (Eds.), Interventions for academic and behavior problems II: Preventive and remedial approaches (pp. 731-754). Bethesda, MD: National Association for School Psychologists.

Baker, S. K., Simmons, D. C., & Kamé enui, E. J. (1998). Vocabulary acquisition: Research bases. In D. C. Simmons & E. J. Kamé enui (Eds.), What reading research tells us about children with diverse learning needs (pp. 183-218). Mahwah, NJ: Lawrence Erlbaum.

Baumann, J. F., & Kamé enui, E. J. (Eds.). (2004). Vocabulary instruction: research to practice. New York: Guilford.

Beck, I. L., & McKeown, M. G. (2001). Text talk: Capturing the benefits of read-aloud experiences for young children. The Reading Teacher, 55(1), 10-20.

Beck, I. L., McKeown, M. G., & Kucan, L. (2002). Bringing words to life: Robust vocabulary instruction. New York: Guilford.

Beck, I. L., McKeown, M. G., Hamilton, R. L., & Kucan, L. (1997). Questioning the author: An approach for enhancing student engagement with text. Newark: DE: International Reading Association.

Biemiller, A. (2001). Teaching vocabulary: Early, direct, and sequential. American Educator, 24-28.

Blachowicz, C., & Ogle, D. (2001). Reading comprehension: Strategies for independent learners. New York: Guilford.

Block, C. C. (2002), Gambrell, L. B., & Pressley, M. (Eds.). Improving comprehension instruction: Rethinking research, theory, and classroom practice. San Francisco, Jossey-Bass.

Block, C. C., & Pressley, M. (Eds.) (2002). Comprehension instruction: Research-based best practices. New York: Guilford Press.

Carlisle, J. F., & Rice, M. S. (2003). Improving reading comprehension: Research-based principles and practices. New York: York Press.

Cooper, J. D., Chard, D. J., Kiger, N. (2006). The struggling reader: Interventions that work. New York: Scholastic.

Coyne, M. D., Chard, D., Zipoli, R. P., Ruby, M. F. (2007). Effective strategies for teaching reading comprehension. In M. D. Coyne, E. J. Kame'eui, D. W. Carnine (Eds.), Effective teaching strategies that accommodate diverse learners (pp. 79-109). Upper Saddle River, NJ: Pearson.

Duke, N. K., & Pearson, D. (2002). Effective practices for developing reading comprehension. In A. Farstrup & S. J. Samuels (Eds.), What research has to say about reading instruction (pp. 205-242). Newark, DE: IRA.

Gersten, R., Fuchs, L. S., Williams, J. P., & Baker, S. (2001). Teaching reading comprehension strategies to students with learning disabilities. Educational Research, 71(2), 279-320.

Goldman, S. R., & Rakestraw, J. A. (2000). Structural aspects of constructing meaning from text. In M. L. Kamil & P. B. Mosenthal & P. D. Pearson & R. Barr (Eds.), Handbook of reading research (Vol. III, pp. 311-336). Mahwah, NJ: Erlbaum.

Heibert, E. H., & Kamil, M. L. (Eds.). (2005). Teaching and learning vocabulary: Bringing research to practice. Mahwah, NJ: Lawrence Erlbaum.

Linden, M., Wittrock, M. C. (1981). The teaching of reading comprehension according to the model of generative learning. Reading Research Quarterly, 17(1), 44-57.

Malone, L. D., & Mastropieri, M. (1992). Reading comprehension instruction: Summarization and self-monitoring training for students with learning disabilities. Exceptional Children, 58(3), 270-79.

Nagy, W., & Scott, J. (2000). Vocabulary processes. In M. Kamil, P. Mosenthal, P.D. Pearson, & R. Barr (Eds.), Handbook of reading research (Vol. III, pp. 269-284). Mahwah, NJ: Erlbaum.

National Reading Panel (2000). Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. Washington, DC: National Academy Press.

National Research Council (1998). Preventing Reading Difficulties in Young Children. Washington DC: National Academy Press.

Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. Cognition and Instruction, 1(2), 117-175.

Pearson, P. D., & Fielding, L. (1991). Comprehension instruction. In R. Barr & M. L. Kamil & P. B. Mosenthal & P. D. Pearson (Eds.), Handbook of reading research (Vol. II, pp. 815-860). New York: Longman.

Perfetti, C. A., Marron, M. A., & Folz, P. W. (1996). Sources of comprehension failure. Theoretical perspectives and case studies. In C. Cornoldi & Oakhill (Eds.), Reading comprehension difficulties: Processes and intervention (pp. 137-166). Mahwah, NJ: Erlbaum.

Pikulski, J. J., & Chard, D. J. (2005). Fluency: Bridge between decoding and reading comprehension. The Reading Teacher, 58, 510-519.

Pressley, M. (2000). What should comprehension instruction be the instruction of? In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), Handbook of reading research (Vol. III, pp. 545-561). Mahwah, NJ: Erlbaum.

RAND Reading Study Group (2002). Reading for understanding: Toward an R&D program in reading comprehension. Santa Monica, CA: RAND Corp.

Schwanenflugel, P. J., Stahl, S. A., & McFalls, E. L. (1997). Partial word knowledge and vocabulary growth during reading comprehension. Journal of Literacy Research, 29(4), 531-553.

Smolkin, L. B., & Donovan, C. A. (2003). Supporting comprehension acquisition for emerging and struggling readers: The interactive information book read-aloud. Exceptionality, 11, 25-38.

Snow, C. E. (1991). The theoretical basis for relationships between language and literacy in development. Journal of Research in Childhood Education, 6, 5-10.

Stahl, S. A., & Shiel, T. G. (1999). Teaching meaning vocabulary: Productive approaches for poor readers. Read all about it! Readings to inform the profession. Sacramento: California State Board of Education, pp. 291-321.

Williams, J. P. (2005). Instruction in reading comprehension for primary-grade students: A focus on text structure. Journal of Special Education, 39(1), 6-18.

Williams, J. (2000). Strategic processing of text: Improving reading comprehension for students with learning disabilities (ERIC.OSEP Digest No. E5999). Arlington, VA: ERIC Clearinghouse on Disabilities and Gifted Education.

This document was written by David J. Chard, Southern Methodist University, Dallas, Texas and Lana Edwards Santoro, University of Oregon, Eugene, Oregon. The document was produced under U.S. Department of Education Contract No. ED-03-CO-0082 with RMC Research Corporation. The views expressed herein do not necessarily represent the policies of the U.S. Department of Education. No official endorsement by the U.S. Department of Education of any product, commodity, service, or enterprise is intended or should be inferred.

2008